

December 5, 2013

Mr. Mark Nations
The Doe Run Company
P.O. Box 1633
Desloge, Missouri 63601

Re: Ambient Air Monitoring Report – Federal Site

Dear Mr. Nations:

Please find attached the August 2013 “*Ambient Air Monitoring Report*” for The Doe Run Company at the Federal Mine Tailings Site, located near Park Hills, Missouri.

This report will include the following:

- **Glossary of Terms** – Listing of the abbreviations used for each parameter and unit.
- **Ambient Air Quality Standards** – Lists the maximum allowable concentrations for the measured parameters.
- **TSP, Lead & PM₁₀ Particulate Summaries** – Includes the averages of each monitored parameter, which relates to the federal standards.
- **Particulate and Lead Analysis Spreadsheets**.
- **Lab Results (lead & cadmium)** – Lab reports from Inovatia Laboratories, LLC.
- **Meteorological Data Printouts** – This supplies printouts of each parameter.

Barr Engineering Company offers this report as an independent laboratory. This includes the weighing of filters, obtaining lead and cadmium analysis, compiling the data, and preparing the report. No interpretation of the data or analysis of the results is implied or intended. Should you have any questions regarding this report, please call.

Respectfully,



Richard J. Campbell, PE
Chemical Engineer
Senior Environmental Consultant

c: Bob Hinkson
Jason Gunter
Ty Morris

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Ambient Air Monitoring Report

***Federal Mine Tailings Site
Park Hills, Missouri***

***Prepared for
The Doe Run Company***

August 2013

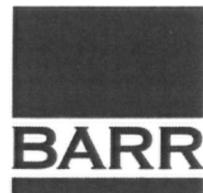


Ambient Air Monitoring Report

***Federal Mine Tailings Site
Park Hills, Missouri***

The Doe Run Company

August 2013



***1001 Diamond Ridge Suite 1100
Jefferson City, MO 65109
Phone: (573) 638-5000
Fax: (573) 638-5001***

GLOSSARY OF TERMS

$\mu\text{g}/\text{m}^3$	Micrograms per Cubic Meter
mph	Miles per Hour
Wind Direction	Degrees from True North
TSP	Total Suspended Particulate
PM ₁₀	Particulate Matter - 10 Microns or Less
mmHg	Millimeters of Mercury

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

PM ₁₀ – Particulate Matter	24-Hour*	Annual Maximum	150 $\mu\text{g}/\text{m}^3$
Lead	Calendar Quarter	Arithmetic Mean	1.5 $\mu\text{g}/\text{m}^3$
Lead	Rolling 3-Month Average	Arithmetic Mean	0.15 $\mu\text{g}/\text{m}^3$

TSP (Total Suspended Particulate) – There are no Federal Standards that apply solely for TSP.

*This standard must be exceeded more than once a year to constitute a violation.



TSP and Lead Concentration Summary

Federal
Park Hills, Missouri

Date 2013	TSP #1 Water Plant ($\mu\text{g}/\text{m}^3$)	TSP #2 Big River #4 ($\mu\text{g}/\text{m}^3$)	TSP #4 St. Joe Park ($\mu\text{g}/\text{m}^3$)	LEAD #1 Water Plant ($\mu\text{g}/\text{m}^3$)	LEAD #2 Big River #4 ($\mu\text{g}/\text{m}^3$)	LEAD #4 St. Joe Park ($\mu\text{g}/\text{m}^3$)
8/1/13	25	31	26	0.017	0.068	0.010
8/2/13	24	31	36	0.008	0.007	0.041
8/5/13	13	13	16	0.000	0.000	0.007
8/6/13	9	8	12	0.000	0.000	0.007
8/7/13	20	13	13	0.026	0.016	0.011
8/8/13	23	26	23	0.019	0.019	0.027
8/9/13	23	31	22	0.006	0.006	0.007
8/12/13	21	20	24	0.024	0.013	0.018
8/13/13	24	40	28	0.012	0.015	0.015
8/14/13	17	19	14	0.026	0.010	0.011
8/15/13	23	34	22	0.024	0.016	0.025
8/16/13	34	46	37	0.013	0.023	0.011
8/19/13	30	33	27	0.022	0.023	0.010
8/20/13	INVALID	23	24	INVALID	0.009	0.013
8/21/13	23	28	29	0.014	0.026	0.030
8/22/13	41	45	32	0.052	0.026	0.016
8/23/13	41	53	44	0.015	0.015	0.010
8/26/13	26	27	32	0.011	0.018	0.020
8/27/13	34	34	42	0.061	0.027	0.068
8/28/13	54	46	49	0.094	0.043	0.079
8/29/13	36	37	38	0.019	0.020	0.028
8/30/13	38	46	43	0.019	0.021	0.017
Monthly Average	27	31	29	0.023	0.019	0.022
Jul 2013				0.020	0.025	0.030
Jun 2013				0.026	0.037	0.042
Rolling 3-month Average				0.02	0.03	0.03
				3-month Average Lead NAAQS $\mu\text{g}/\text{m}^3$		
				0.15		

Please see the particulate analysis sheets for explanations of missing or invalid data.



Particulate Summary

Federal
Park Hills, Missouri

Date	PM ₁₀ #1 - Water Plant (µg/m ³)	PM ₁₀ #2 - Big River #4 (µg/m ³)	PM ₁₀ #4 - St. Joe Park (µg/m ³)	PM ₁₀ NAAQS (µg/m ³)
2013				
2-Aug	15	18	20	150
5-Aug	9	9	9	150
8-Aug	13	12	13	150
11-Aug	25	22	21	150
14-Aug	13	12	10	150
17-Aug	22	21	21	150
20-Aug	22	21	18	150
23-Aug	32	33	28	150
26-Aug	25	21	22	150
29-Aug	33	21	22	150
<hr/>				
Monthly Average	21	19	18	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

Particulate and Lead Analysis



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P4475

Federal Site Water Plant #1

Sample Date 2013	Filter ID	TSP Net Wt. g	Lead Total Wt. mg	T _{av} C	P _{av} mmHg	P _f mmHg	Ratio P _f /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Concentrations TSP µg/m ³	Lead µg/m ³
8/1/2013	8718663	0.0422	29	23	745.8	36.0	0.952	1.230	1.213	23.62	1720	25	0.017
8/2/2013	8718652	0.0412	13	23	743.8	35.9	0.952	1.229	1.211	23.82	1730	24	0.008
8/5/2013	8718643	0.0218	< 10	21	744.3	35.6	0.952	1.226	1.218	23.77	1737	13	0.000
8/6/2013	8718632	0.0161	< 10	25	742.0	36.1	0.951	1.232	1.204	23.77	1716	9	0.000
8/7/2013	8718622	0.0337	44	24	742.1	36.0	0.951	1.230	1.206	23.79	1722	20	0.026
8/8/2013	8718611	0.0387	33	23	742.8	36.0	0.952	1.230	1.208	23.68	1716	23	0.019
8/9/2013	8718601	0.0390	11	23	744.8	35.9	0.952	1.229	1.213	23.81	1733	23	0.006
8/12/2013	8718791	0.0354	41	23	744.3	35.9	0.952	1.230	1.211	23.73	1724	21	0.024
8/13/2013	8718779	0.0413	20	22	745.4	35.8	0.952	1.228	1.215	23.75	1732	24	0.012
8/14/2013	8718769	0.0301	45	17	748.3	35.2	0.953	1.220	1.233	23.66	1750	17	0.026
8/15/2013	8718758	0.0396	42	16	747.4	35.1	0.953	1.219	1.233	23.69	1753	23	0.024
8/16/2013	8718748	0.0595	23	17	747.5	35.2	0.953	1.220	1.232	23.79	1758	34	0.013
8/19/2013	8718737	0.0520	39	22	746.8	35.8	0.952	1.228	1.218	23.70	1732	30	0.022
8/20/2013	8718727	0.0633	33	23	746.7	36.0	0.952	1.230	1.215	18.50	1348	INVALID	INVALID
8/21/2013	8718717	0.0397	24	24	746.9	36.1	0.952	1.232	1.212	23.85	1735	23	0.014
8/22/2013	8718706	0.0699	89	26	746.4	36.3	0.951	1.234	1.208	23.70	1717	41	0.052
8/23/2013	8722396	0.0704	26	25	746.4	36.2	0.951	1.233	1.209	23.81	1728	41	0.015
8/26/2013	8722385	0.0447	19	28	748.5	36.5	0.951	1.237	1.207	23.71	1717	26	0.011
8/27/2013	8722375	0.0583	104	27	746.2	36.4	0.951	1.235	1.205	23.68	1713	34	0.061
8/28/2013	8722365	0.0929	162	27	745.3	36.4	0.951	1.235	1.204	23.79	1719	54	0.094
8/29/2013	8722354	0.0623	33	27	744.9	36.5	0.951	1.236	1.202	23.73	1711	36	0.019
8/30/2013	8722344	0.0638	33	28	742.8	36.6	0.951	1.238	1.196	23.43	1681	38	0.019

Data Captured	TSP	Lead
Valid Samples:	21	21
Scheduled Samples:	22	22
Percent Data Captured:	95%	95%

Monthly Average:	27	0.023
Standard Deviation:	11	0.022
Maximum:	54	0.094
Minimum:	9	0.000

NOTES

8/20/2013 - INVALID - Mechanical Failure

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = (((Temp in °Kelvin * Temp Slope)+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_f/P_a = pressure ratio of P_f and P_{av} = 1 - P_f/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in µg/std m³

Lead = mass concentration in µg/std m³



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P4557

Federal Site #2 - Big River #4

Sample Date 2013	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. mg	T _{av} C	P _{av} mmHg	P _r mmHg	Ratio P _r /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Concentrations TSP µg/m ³	Lead µg/m ³
8/1/2013	8718665	0.0543	119	23	745.8	36.0	0.952	1.243	1.227	23.77	1749	31	0.068
8/2/2013	8718654	0.0549	13	23	743.8	35.9	0.952	1.243	1.224	23.75	1744	31	0.007
8/5/2013	8718645	0.0223	< 10	21	744.3	35.6	0.952	1.239	1.231	23.68	1749	13	0.000
8/6/2013	8718635	0.0132	< 10	25	742.0	36.1	0.951	1.245	1.217	23.64	1726	8	0.000
8/7/2013	8718624	0.0233	28	24	742.1	36.0	0.951	1.243	1.219	23.67	1732	13	0.016
8/8/2013	8718614	0.0450	32	23	742.8	36.0	0.952	1.243	1.221	23.53	1724	26	0.019
8/9/2013	8718603	0.0538	10	23	744.8	35.9	0.952	1.242	1.226	23.82	1752	31	0.006
8/12/2013	8718793	0.0354	23	23	744.3	35.9	0.952	1.243	1.224	23.70	1741	20	0.013
8/13/2013	8718781	0.0698	25	22	745.4	35.8	0.952	1.241	1.228	23.67	1745	40	0.015
8/14/2013	8718771	0.0332	18	17	748.3	35.2	0.953	1.234	1.247	23.71	1773	19	0.010
8/15/2013	8718760	0.0605	29	16	747.4	35.1	0.953	1.232	1.247	23.70	1773	34	0.016
8/16/2013	8718750	0.0821	41	17	747.5	35.2	0.953	1.233	1.245	23.73	1773	46	0.023
8/19/2013	8718739	0.0575	39	22	746.8	35.8	0.952	1.241	1.231	23.69	1749	33	0.023
8/20/2013	8718729	0.0400	16	23	746.7	36.0	0.952	1.243	1.228	23.62	1740	23	0.009
8/21/2013	8718719	0.0485	45	24	746.9	36.1	0.952	1.245	1.226	23.48	1727	28	0.026
8/22/2013	8718708	0.0774	45	26	746.4	36.3	0.951	1.248	1.221	23.72	1738	45	0.026
8/23/2013	8722398	0.0910	26	25	746.4	36.2	0.951	1.247	1.223	23.55	1728	53	0.015
8/26/2013	8722387	0.0468	32	28	748.5	36.5	0.951	1.251	1.220	23.62	1729	27	0.018
8/27/2013	8722377	0.0594	47	27	746.2	36.4	0.951	1.249	1.219	23.66	1730	34	0.027
8/28/2013	8722367	0.0806	74	27	745.3	36.4	0.951	1.249	1.218	23.73	1734	46	0.043
8/29/2013	8722356	0.0636	35	27	744.9	36.5	0.951	1.250	1.215	23.71	1729	37	0.020
8/30/2013	8722346	0.0771	36	28	742.8	36.6	0.951	1.252	1.208	23.34	1692	46	0.021

Data Captured	TSP	Lead
Valid Samples:	22	22
Scheduled Samples:	22	22
Percent Data Captured:	100%	100%

Monthly Average:	31	0.019
Standard Deviation:	12	0.015
Maximum:	53	0.068
Minimum:	8	0.000

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_r = (((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_r = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_r/P_a = pressure ratio of P_r and P_{av} = 1 - P_r/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in µg/std m³

Lead = mass concentration in µg/std m³



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P6792

Federal Site #4 St. Joe Park

Sample Date 2013	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. mg	T _{av} C	P _{av} mmHg	P _r mmHg	Ratio P _r /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Concentrations TSP µg/m ³	Lead µg/m ³
8/1/2013	8718658	0.0446	18	23	745.8	36.0	0.952	1.235	1.219	23.62	1727	26	0.010
8/2/2013	8718655	0.0614	71	23	743.8	35.9	0.952	1.235	1.216	23.54	1717	36	0.041
8/5/2013	8718638	0.0283	13	21	744.3	35.6	0.952	1.230	1.222	23.71	1739	16	0.007
8/6/2013	8718627	0.0202	13	25	742.0	36.1	0.951	1.237	1.209	23.65	1715	12	0.007
8/7/2013	8718617	0.0230	19	24	742.1	36.0	0.951	1.235	1.212	23.63	1718	13	0.011
8/8/2013	8718606	0.0395	47	23	742.8	36.0	0.952	1.235	1.213	23.53	1712	23	0.027
8/9/2013	8718796	0.0375	12	23	744.8	35.9	0.952	1.234	1.218	23.65	1729	22	0.007
8/12/2013	8718786	0.0409	30	23	744.3	35.9	0.952	1.235	1.216	23.72	1731	24	0.018
8/13/2013	8718774	0.0481	25	22	745.4	35.8	0.952	1.233	1.220	23.59	1727	28	0.015
8/14/2013	8718764	0.0254	19	17	748.3	35.2	0.953	1.225	1.238	23.61	1754	14	0.011
8/15/2013	8718753	0.0380	44	16	747.4	35.1	0.953	1.224	1.238	23.59	1753	22	0.025
8/16/2013	8718746	0.0651	19	17	747.5	35.2	0.953	1.225	1.237	23.63	1754	37	0.011
8/19/2013	8718732	0.0466	18	22	746.8	35.8	0.952	1.233	1.223	23.67	1737	27	0.010
8/20/2013	8718722	0.0415	23	23	746.7	36.0	0.952	1.235	1.220	23.62	1729	24	0.013
8/21/2013	8718712	0.0499	52	24	746.9	36.1	0.952	1.237	1.218	23.62	1726	29	0.030
8/22/2013	8718701	0.0558	27	26	746.4	36.3	0.951	1.239	1.213	23.66	1721	32	0.016
8/23/2013	8722391	0.0754	17	25	746.4	36.2	0.951	1.238	1.214	23.71	1728	44	0.010
8/26/2013	8722380	0.0552	34	28	748.5	36.5	0.951	1.242	1.212	23.66	1720	32	0.020
8/27/2013	8722370	0.0723	116	27	746.2	36.4	0.951	1.240	1.210	23.64	1717	42	0.068
8/28/2013	8722360	0.0839	136	27	745.3	36.4	0.951	1.240	1.209	23.57	1710	49	0.079
8/29/2013	8722349	0.0643	48	27	744.9	36.5	0.951	1.241	1.207	23.63	1711	38	0.028
8/30/2013	8722339	0.0737	28	28	742.8	36.6	0.951	1.243	1.200	23.61	1700	43	0.017

Data Captured	TSP	Lead
Valid Samples:	22	22
Scheduled Samples:	22	22
Percent Data Captured:	100%	100%

Monthly Average:	29	0.022
Standard Deviation:	11	0.019
Maximum:	49	0.079
Minimum:	12	0.007

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_r = (((Temp in °Kelvin * Temp Slope))+Temp Int.))*1.868

P_r = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_r/P_a = pressure ratio of P_r and P_{av} = 1 - P_r/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in µg/std m³

Lead = mass concentration in µg/std m³



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P04558

Big River Site #4 - QA

Sample Date	Filter ID	TSP Filter Net Wt.	Lead Total Wt.	T _{av} C	P _{av} mmHg	P _f mmHg	Ratio P _o /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Concentrations TSP µg/m ³	Lead µg/m ³
8/1/2013	8718666	0.0567	41	23	745.8	36.0	0.952	1.238	1.222	23.50	1723	33	0.024
8/6/2013	8718634	0.0146	< 10	25	742.0	36.1	0.951	1.240	1.212	23.89	1737	8	0.000
8/8/2013	8718613	0.0454	31	23	742.8	36.0	0.952	1.239	1.216	23.70	1729	26	0.018
8/13/2013	8718785	0.0713	26	22	745.4	35.8	0.952	1.237	1.224	23.73	1743	41	0.015
8/15/2013	8718761	0.0604	29	16	747.4	35.1	0.953	1.228	1.242	23.72	1768	34	0.016
8/20/2013	8718740	0.0408	< 10	23	746.7	36.0	0.952	1.239	1.223	23.74	1743	23	0.000
8/22/2013	8718709	0.0796	51	26	746.4	36.3	0.951	1.243	1.216	23.71	1731	46	0.030
8/27/2013	87222388	0.0597	53	27	746.2	36.4	0.951	1.244	1.214	23.65	1723	35	0.031
8/29/2013	87222357	0.0657	33	27	744.9	36.5	0.951	1.245	1.211	23.71	1722	38	0.019

Valid Samples: 9 9

Monthly Average: 32 0.017

Scheduled Samples: 9 9

Standard Deviation: 11 0.011

Percent Data Captured: 100% 100%

Maximum: 46 0.031

Minimum: 8 0.000

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celsius

Q_a = look up table volumetric flow rate

P_{av} = average station pressure in millimeters of mercury

Q_{std} = total sample volumetric flow rate corrected to standard conditions

P_f = (((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

V_{std} = total sample volume corrected to standard conditions

P_o = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

TSP = mass concentration in µg/std m³

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - P_f/P_{av}

Lead = mass concentration in µg/std m³



PM₁₀ Analysis

The Doe Run Company

Federal Site #1 Water Plant											
Sample Date	Filter ID	PM10 Filter Net Wt.	T _{av}	P _{av}	P _f	Ratio P _o /P _a	Q _a	Q _{std}	Elapsed Time	Sample Volume V _{std}	Mass Conc. PM ₁₀ µg/m ³
2013	ID	g	C	mmHg	mmHg		m ³ /min	m ³ /min	hr	m ³	
8/2/2013	289890	0.0238	23	743.8	35.9	0.952	1.148	1.131	23.43	1589	15
8/5/2013	289880	0.0141	21	744.3	35.6	0.952	1.144	1.137	23.43	1598	9
8/8/2013	289869	0.0214	23	742.8	36.0	0.952	1.149	1.128	23.43	1586	13
8/11/2013	289859	0.0399	24	747.1	36.0	0.952	1.150	1.134	23.49	1598	25
8/14/2013	289848	0.0203	17	748.3	35.2	0.953	1.140	1.151	23.41	1617	13
8/17/2013	289836	0.0357	20	747.7	35.6	0.952	1.144	1.143	23.50	1611	22
8/20/2013	289826	0.0352	23	746.7	36.0	0.952	1.149	1.135	23.50	1600	22
8/23/2013	289815	0.0503	25	746.4	36.2	0.951	1.151	1.129	23.46	1590	32
8/26/2013	289804	0.0394	28	748.5	36.5	0.951	1.155	1.127	23.45	1586	25
8/29/2013	289994	0.0519	27	744.9	36.5	0.951	1.154	1.122	23.45	1579	33

Valid Samples: 10	Monthly Average: 21
Scheduled Samples: 10	Standard Deviation: 8
Percent Data Captured: 100%	Maximum: 33
	Minimum: 9

NOTES

DEFINITIONS and CALCULATIONS

T _{av} = average temperature in degrees Celcius	P _o /P _a = pressure ratio of P _f and P _{av} = 1 - P _f /P _{av}
P _{av} = average station pressure in millimeters of mercury	Q _a = look up table volumetric flow rate
P _f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868	Q _{std} = sample volumetric flow rate corrected to standard conditions
P _f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868	V _{std} = sample volume corrected to standard conditions



PM₁₀ Analysis

The Doe Run Company

SAMPLER ID P2952		Federal Site #2 - Big River Site #4										
Sample Date 2013	Filter ID	PM10 Filter Net Wt. g	T _{av} C	P _{av} mmHg	P _f mmHg	Ratio P _f /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Conc. PM ₁₀ µg/m ³	
8/2/2013	289892	0.0290	23	743.8	35.9	0.952	1.148	1.131	23.68	1606	18	
8/5/2013	289882	0.0139	21	744.3	35.6	0.952	1.144	1.137	23.63	1611	9	
8/8/2013	289871	0.0187	23	742.8	36.0	0.952	1.149	1.128	23.65	1601	12	
8/11/2013	289861	0.0356	24	747.1	36.0	0.952	1.150	1.134	23.65	1609	22	
8/14/2013	289850	0.0191	17	748.3	35.2	0.953	1.140	1.151	23.64	1633	12	
8/17/2013	289839	0.0341	20	747.7	35.6	0.952	1.144	1.143	23.70	1625	21	
8/20/2013	289828	0.0330	23	746.7	36.0	0.952	1.149	1.135	23.61	1607	21	
8/23/2013	289817	0.0532	25	746.4	36.2	0.951	1.151	1.129	23.65	1603	33	
8/26/2013	289807	0.0338	28	748.5	36.5	0.951	1.155	1.127	23.60	1596	21	
8/29/2013	289996	0.0334	27	744.9	36.5	0.951	1.154	1.122	23.60	1589	21	

Valid Samples: 10	Monthly Average: 19
Scheduled Samples: 10	Standard Deviation: 7
Percent Data Captured: 100%	Maximum: 33
	Minimum: 9

NOTES

DEFINITIONS and CALCULATIONS

T _{av} = average temperature in degrees Celcius	P _f /P _a = pressure ratio of P _f and P _{av} = 1 - P _f /P _{av}
P _{av} = average station pressure in millimeters of mercury	Q _a = look up table volumetric flow rate
P _f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868	Q _{std} = sample volumetric flow rate corrected to standard conditions
P _f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868	V _{std} = sample volume corrected to standard conditions



PM₁₀ Analysis

The Doe Run Company

Federal Site #4 St. Joe Park																				
SAMPLER ID	P4354	PM10 Filter Net Wt.	T _{av}	P _{av}	P _f	Ratio P _o /P _a	Q _a	Q _{std}	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Conc. PM ₁₀ µg/m ³									
Sample Date	Filter ID	g	C	mmHg	mmHg		m ³ /min	m ³ /min												
8/2/2013	289885	0.0314	23	743.8	35.9	0.952	1.148	1.131	23.71	1608	20									
8/5/2013	289875	0.0138	21	744.3	35.6	0.952	1.144	1.137	23.71	1617	9									
8/8/2013	289864	0.0207	23	742.8	36.0	0.952	1.149	1.128	23.69	1603	13									
8/11/2013	289853	0.0346	24	747.1	36.0	0.952	1.150	1.134	23.77	1617	21									
8/14/2013	289843	0.0171	17	748.3	35.2	0.953	1.140	1.151	23.70	1637	10									
8/17/2013	289831	0.0344	20	747.7	35.6	0.952	1.144	1.143	23.79	1631	21									
8/20/2013	289821	0.0290	23	746.7	36.0	0.952	1.149	1.135	23.71	1614	18									
8/23/2013	289810	0.0442	25	746.4	36.2	0.951	1.151	1.129	23.72	1607	28									
8/26/2013	290000	0.0346	28	748.5	36.5	0.951	1.155	1.127	23.68	1602	22									
8/29/2013	289989	0.0351	27	744.9	36.5	0.951	1.154	1.122	23.67	1594	22									
Valid Samples: 10			Monthly Average: 18																	
Scheduled Samples: 10			Standard Deviation: 6																	
Percent Data Captured: 100%			Maximum: 28																	
			Minimum: 9																	
NOTES																				
DEFINITIONS and CALCULATIONS																				
T _{av} = average temperature in degrees Celcius																				
P _{av} = average station pressure in millimeters of mercury																				
P _f = ((Temp in °Kelvin * Temp Slope))+Temp Int)*1.868																				
P _t = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868																				
P _o /P _a = pressure ratio of P _f and P _{av} = 1 - P _f /P _{av}																				
Q _a = look up table volumetric flow rate																				
Q _{std} = sample volumetric flow rate corrected to standard conditions																				
V _{std} = sample volume corrected to standard conditions																				



PM₁₀ Analysis

The Doe Run Company

Lab Results (Lead and Cadmium)



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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0851
Date Received: 08/23/13
Analysis Method: 40 CFR §50
Appendix G

Location **Federal**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134354	8718663	08/01/13	#1 East - WTP	29	< 10	08/28/13 - DS
134357	8718652	08/02/13	#1 East - WTP	13	< 10	08/28/13 - DS
134358	8718658	08/01/13	#4 St. Joe Park	18	< 10	08/28/13 - DS
134359	8718655	08/02/13	#4 St. Joe Park	71	< 10	08/28/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0882
Date Received: 9/4/13
Analysis Method: 40 CFR §50
Appendix G

Location	Federal
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Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134523	8718643	08/05/13	#1 East - WTP	< 10	< 10	09/12/13 - DS
134526	8718632	08/06/13	#1 East - WTP	< 10	< 10	09/18/13 - DS
134529	8718622	08/07/13	#1 East - WTP	44	< 10	09/18/13 - DS
134532	8718611	08/08/13	#1 East - WTP	33	< 10	09/18/13 - DS
134535	8718601	08/09/13	#1 East - WTP	11	< 10	09/12/13 - DS
134536	8718638	08/05/13	#4 St. Joe Park	13	< 10	09/12/13 - DS
134537	8718627	08/06/13	#4 St. Joe Park	13	< 10	09/12/13 - DS
134538	8718617	08/07/13	#4 St. Joe Park	19	< 10	09/12/13 - DS
134539	8718606	08/08/13	#4 St. Joe Park	47	< 10	09/12/13 - DS
134540	8718796	08/09/13	#4 St. Joe Park	12	< 10	09/12/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0883

Date Received: 09/04/13

Analysis Method: 40 CFR §50
Appendix G

Location

Federal

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134575	8718791	08/12/13	#1 East - WTP	41	< 10	09/13/13 - DS
134578	8718779	08/13/13	#1 East - WTP	20	< 10	09/17/13 - DS
134581	8718769	08/14/13	#1 East - WTP	45	< 10	09/17/13 - DS
134584	8718758	08/15/13	#1 East - WTP	42	< 10	09/17/13 - DS
134587	8718748	08/16/13	#1 East - WTP	23	< 10	09/13/13 - DS
134588	8718786	08/12/13	#4 St. Joe Park	30	< 10	09/13/13 - DS
134589	8718774	08/13/13	#4 St. Joe Park	25	< 10	09/13/13 - DS
134590	8718764	08/14/13	#4 St. Joe Park	19	< 10	09/13/13 - DS
134591	8718753	08/15/13	#4 St. Joe Park	44	< 10	09/13/13 - DS
134592	8718746	08/16/13	#4 St. Joe Park	19	< 10	09/13/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0905
Date Received: 09/10/13
Analysis Method: 40 CFR §50
Appendix G

Location Federal

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134739	8718737	08/19/13	#1 East - WTP	39	< 10	09/25/13 - DS
134742	8718727	08/20/13	#1 East - WTP	33	< 10	09/23/13 - DS
134745	8718717	08/21/13	#1 East - WTP	24	< 10	09/23/13 - DS
134748	8718706	08/22/13	#1 East - WTP	89	< 10	09/23/13 - DS
134751	8722396	08/23/13	#1 East - WTP	26	< 10	09/23/13 - DS
134752	8718732	08/19/13	#4 St. Joe Park	18	< 10	09/23/13 - DS
134753	8718722	08/20/13	#4 St. Joe Park	23	< 10	09/23/13 - DS
134754	8718712	08/21/13	#4 St. Joe Park	52	< 10	09/23/13 - DS
134755	8718701	08/22/13	#4 St. Joe Park	27	< 10	09/23/13 - DS
134756	8722391	08/23/13	#4 St. Joe Park	17	< 10	09/23/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0950
Date Received: 09/19/13
Analysis Method: 40 CFR §50
Appendix G

Location **Federal**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134928	8722385	08/26/13	#1 East - WTP	19	< 10	09/25/13 - DS
134931	8722375	08/27/13	#1 East - WTP	104	< 10	09/27/13 - DS
134934	8722365	08/28/13	#1 East - WTP	162	< 10	09/27/13 - DS
134937	8722354	08/29/13	#1 East - WTP	33	< 10	09/27/13 - DS
134940	8722344	08/30/13	#1 East - WTP	33	< 10	09/25/13 - DS
134941	8722380	08/26/13	#4 St. Joe Park	34	< 10	09/25/13 - DS
134942	8722370	08/27/13	#4 St. Joe Park	116	< 10	09/25/13 - DS
134943	8722360	08/28/13	#4 St. Joe Park	136	< 10	09/25/13 - DS
134944	8722349	08/29/13	#4 St. Joe Park	48	< 10	09/25/13 - DS
134945	8722339	08/30/13	#4 St. Joe Park	28	< 10	09/25/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0851
Date Received: 08/23/13
Analysis Method: 40 CFR §50
Appendix G

Location	Big River
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Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134349	8718665	08/01/13	#4 Primary	119	< 10	08/28/13 - DS
134350	8718666	08/01/13	#4 QA	41	< 10	08/28/13 - DS
134351	8718654	08/02/13	#4 Primary	13	< 10	08/28/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0882
Date Received: 9/4/13
Analysis Method: 40 CFR §50
Appendix G

Location	Big River
-----------------	------------------

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134514	8718645	08/05/13	#4 Primary	< 10	< 10	09/12/13 - DS
134515	8718635	08/06/13	#4 Primary	< 10	< 10	09/12/13 - DS
134516	8718634	08/06/13	#4 QA	< 10	< 10	09/12/13 - DS
134517	8718624	08/07/13	#4 Primary	28	< 10	09/12/13 - DS
134518	8718614	08/08/13	#4 Primary	32	< 10	09/12/13 - DS
134519	8718613	08/08/13	#4 QA	31	< 10	09/12/13 - DS
134520	8718603	08/09/13	#4 Primary	10	< 10	09/12/13 - DS

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0883
Date Received: 09/04/13
Analysis Method: 40 CFR §50
Appendix G

Location Big River

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134566	8718793	08/12/13	#4 Primary	23	< 10	09/13/13 - DS
134567	8718781	08/13/13	#4 Primary	25	< 10	09/13/13 - DS
134568	8718785	08/13/13	#4 QA	26	< 10	09/13/13 - DS
134569	8718771	08/14/13	#4 Primary	18	< 10	09/13/13 - DS
134570	8718760	08/15/13	#4 Primary	29	< 10	09/13/13 - DS
134571	8718761	08/15/13	#4 QA	29	< 10	09/13/13 - DS
134572	8718750	08/16/13	#4 Primary	41	< 10	09/13/13 - DS

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ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0905
Date Received: 09/10/13
Analysis Method: 40 CFR §50
Appendix G

Location Big River

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134730	8718739	08/19/13	#4 Primary	39	< 10	09/25/13 - DS
134731	8718729	08/20/13	#4 Primary	16	< 10	09/25/13 - DS
134732	8718740	08/20/13	#4 QA	< 10	< 10	09/25/13 - DS
134733	8718719	08/21/13	#4 Primary	45	< 10	09/25/13 - DS
134734	8718708	08/22/13	#4 Primary	45	< 10	09/25/13 - DS
134735	8718709	08/22/13	#4 QA	51	< 10	09/25/13 - DS
134736	8722398	08/23/13	#4 Primary	26	< 10	09/25/13 - DS

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 13-0950
Date Received: 09/19/13
Analysis Method: 40 CFR §50
Appendix G

Location Big River

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
134919	8722387	08/26/13	#4 Primary	32	< 10	09/25/13 - DS
134920	8722377	08/27/13	#4 Primary	47	< 10	09/25/13 - DS
134921	8722388	08/27/13	#4 QA	53	< 10	09/25/13 - DS
134922	8722367	08/28/13	#4 Primary	74	< 10	09/25/13 - DS
134923	8722356	08/29/13	#4 Primary	35	< 10	09/25/13 - DS
134924	8722357	08/29/13	#4 QA	33	< 10	09/25/13 - DS
134925	8722346	08/30/13	#4 Primary	36	< 10	09/25/13 - DS

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Meteorological Data

Meteorological Report
The Doe Run Company
Wind Speed

Site Name: Rivermines

Average Interval: 01 Hour

Units: mph

Sampling Frequency: 01 Second

2013	Hour																										
		Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max
1-Aug	0.2	0.0	0.2	0.0	0.1	0.1	0.4	2.4	3.4	3.5	4.3	2.4	3.1	2.7	2.6	3.6	1.5	0.1	0.1	0.2	0.1	0.0	0.1	4.3	1.3		
2-Aug	0.1	0.3	0.1	0.1	0.1	0.0	0.1	0.1	1.6	5.9	6.3	6.1	6.4	4.6	4.7	5.3	6.6	5.9	4.4	3.3	2.9	2.0	0.7	0.2	6.6	2.8	
3-Aug	0.0	0.1	0.0	0.2	0.1	0.2	0.1	0.4	0.5	0.2	2.6	5.0	5.9	6.2	2.5	1.3	2.4	2.3	1.0	0.0	0.0	0.1	0.5	0.2	6.2	1.3	
4-Aug	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.6	1.4	3.4	3.3	2.4	2.5	2.0	3.1	1.7	1.3	3.2	2.1	1.2	1.3	0.6	0.7	0.6	3.4	1.3	
5-Aug	1.1	1.0	0.7	0.6	1.4	0.5	0.3	1.0	0.6	0.7	2.3	1.4	3.9	4.0	4.6	4.8	3.0	3.3	2.1	3.4	3.3	3.0	2.3	0.8	4.8	2.1	
6-Aug	0.2	0.2	0.1	0.2	0.1	0.4	1.2	2.1	0.7	2.3	0.5	1.7	2.2	4.2	2.6	0.8	3.9	5.1	3.9	4.0	4.2	2.4	1.5	1.4	5.1	1.9	
7-Aug	0.9	0.5	3.5	0.8	2.7	3.5	2.4	5.3	3.1	1.6	0.8	0.7	1.4	1.7	0.9	1.3	1.8	0.7	1.6	0.3	0.3	0.0	0.3	0.1	5.3	1.5	
8-Aug	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.8	1.1	0.5	1.8	2.3	1.5	1.0	0.4	0.6	0.1	0.6	2.3	0.2	0.0	0.1	2.3	0.6	
9-Aug	0.1	0.1	0.1	0.1	0.0	0.0	0.8	1.3	1.2	2.6	1.4	0.0	0.2	0.7	1.0	1.6	0.4	0.1	0.1	0.0	0.3	0.1	0.3	0.0	2.6	0.5	
10-Aug	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.8	2.2	1.8	2.1	2.0	2.4	2.2	3.3	3.2	1.2	0.3	0.0	0.2	0.3	0.1	0.1	0.1	3.3	1.0	
11-Aug	0.1	0.1	0.0	0.1	0.2	0.0	0.2	1.0	1.2	2.3	1.8	2.2	1.4	1.6	1.2	1.3	1.5	0.5	1.5	1.0	0.3	0.2	0.0	0.0	2.3	0.8	
12-Aug	0.0	0.0	0.1	0.0	0.0	0.1	0.1	1.4	2.1	2.4	1.1	1.1	4.2	3.0	0.5	0.8	0.4	1.9	0.8	0.1	0.1	0.2	0.0	0.1	4.2	0.9	
13-Aug	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	2.3	4.0	6.0	5.7	6.4	6.0	5.4	4.3	4.6	1.7	0.2	0.4	0.1	1.3	0.9	6.4	2.3		
14-Aug	0.1	0.1	0.0	0.1	0.1	0.1	0.1	2.5	3.6	4.8	4.8	4.3	4.2	3.4	4.1	3.3	2.8	2.2	0.6	0.1	0.3	0.1	0.1	0.2	4.8	1.7	
15-Aug	0.2	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.4	1.9	2.8	3.7	3.7	3.3	2.4	2.2	2.9	2.0	0.4	0.0	0.2	0.2	0.1	0.1	3.7	1.1	
16-Aug	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	1.5	2.6	3.6	4.0	3.8	2.7	3.3	2.5	1.2	1.2	0.0	0.1	0.1	0.4	0.0	0.2	4.0	1.2	
17-Aug	0.1	0.1	0.0	0.0	0.1	0.2	2.1	3.5	3.6	3.9	2.0	2.3	2.6	2.6	2.7	2.9	2.4	1.5	1.5	1.2	0.6	0.1	0.1	0.1	3.9	1.5	
18-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	2.5	4.2	3.6	4.2	4.3	3.3	4.1	2.7	2.4	1.8	1.1	0.0	0.3	0.0	0.5	0.3	4.3	1.5	
19-Aug	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.8	2.1	1.6	1.7	1.4	2.0	1.9	1.0	0.7	0.2	0.0	0.1	0.1	0.1	2.1	0.6	
20-Aug	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3	1.0	0.6	1.5	2.0	1.7	2.1	2.4	2.8	2.0	0.1	0.0	0.1	0.1	0.1	0.3	2.1	0.6	
21-Aug	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.8	2.8	1.6	2.2	2.4	2.1	2.4	2.8	2.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	2.8	0.8	
22-Aug	0.2	0.2	0.1	0.2	0.0	0.2	0.1	0.2	1.1	1.1	1.6	2.1	2.6	2.7	2.4	2.5	2.4	2.0	0.7	0.5	0.2	0.2	0.2	0.1	0.1	2.8	0.8
23-Aug	0.1	0.2	0.2	0.2	0.1	0.3	0.1	0.1	0.6	1.2	2.9	1.5	2.3	2.2	0.3	2.3	1.3	0.0	0.0	0.0	0.0	0.2	0.2	0.2	2.7	0.7	
24-Aug	0.1	0.1	0.1	0.3	0.0	0.1	0.2	0.8	1.5	1.9	2.5	2.6	2.6	2.4	2.5	3.0	2.3	0.6	0.0	0.5	0.7	0.1	0.0	0.0	3.0	1.0	
25-Aug	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.4	0.5	0.9	2.6	3.3	2.5	2.6	3.1	2.8	2.1	2.5	3.8	3.9	3.4	2.6	3.9	1.6	
26-Aug	0.5	0.6	0.7	0.0	0.3	0.3	0.4	1.7	3.1	2.5	2.3	2.9	1.5	2.2	1.9	3.2	3.2	3.7	4.0	4.3	3.6	2.0	0.2	0.3	4.3	1.9	
27-Aug	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.6	1.3	1.1	1.8	1.5	1.7	1.9	1.1	0.6	0.7	0.4	0.2	0.1	0.2	0.2	0.1	0.0	1.9	0.6	
28-Aug	0.3	0.5	0.2	0.2	0.1	0.2	0.2	0.0	0.7	1.2	2.1	2.3	2.4	2.3	1.2	2.0	1.1	0.2	0.1	0.0	0.1	0.2	0.1	0.1	2.4	0.7	
29-Aug	0.1	0.3	0.1	0.2	0.1	0.1	0.3	0.4	1.9	2.7	1.7	1.3	1.4	1.8	1.7	0.8	0.1	0.3	0.2	0.1	0.2	0.1	0.1	0.1	2.7	0.7	
30-Aug	0.3	0.2	0.3	0.2	0.2	0.3	0.1	0.3	1.0	1.4	1.8	1.8	1.7	2.5	2.0	1.8	1.8	0.9	0.1	0.1	0.2	0.1	0.1	0.1	2.5	0.8	
31-Aug	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.3	1.6	1.8	2.0	2.4	2.6	3.1	3.8	4.4	4.6	3.7	2.8	0.4	0.2	0.2	0.1	0.4	4.6	1.5	

		Maximum Hour//Monthly Average	6.6
		Total Hours in Month	744
		Valid Hours//Percent Data Captured	100.0%
BARR			

Meteorological Report
The Doe Run Company
Wind Direction

Site Name: Rivermines

Average Interval: 01 Hour

Units: Degrees

Sampling Frequency: 01 Second

2013	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24 Hour Avg
Day																										
1-Aug	184	185	184	197	201	181	220	325	330	349	348	350	5	341	15	331	37	28	42	207	191	192	186	186	201	
2-Aug	239	181	228	187	176	109	184	338	208	215	216	192	194	197	183	193	205	189	195	197	199	192	186	186	201	
3-Aug	171	185	238	23	205	189	217	222	250	245	325	328	340	360	350	19	26	21	24	358	37	190	187	188	196	
4-Aug	229	186	194	181	178	0	213	40	106	79	91	89	132	113	42	72	69	98	119	132	129	91	116	167	119	
5-Aug	180	163	141	184	172	178	103	183	181	164	164	148	165	167	175	177	153	149	164	175	180	189	187	197	168	
6-Aug	198	178	216	186	181	215	237	197	204	206	278	225	216	211	209	214	175	164	163	163	174	183	197	190	199	
7-Aug	187	198	209	186	221	212	238	232	228	220	323	284	339	357	69	132	173	188	189	199	194	238	216	198	218	
8-Aug	224	214	187	189	181	273	191	205	242	222	80	34	353	205	231	250	269	226	211	344	360	25	168	192	211	
9-Aug	193	218	192	1	150	340	16	20	62	90	129	173	98	344	31	126	174	219	339	193	191	190	191	187	161	
10-Aug	190	202	177	202	196	197	233	237	357	38	34	26	29	29	30	10	7	26	26	20	26	192	196	191	119	
11-Aug	189	186	196	181	181	182	196	22	85	30	45	97	126	113	168	41	26	42	97	118	100	166	105	193	120	
12-Aug	192	81	218	185	191	188	187	177	218	221	248	280	314	323	273	254	315	333	278	208	190	190	226	204	229	
13-Aug	224	230	213	191	197	229	286	322	331	353	350	1	355	359	10	4	21	10	22	22	20	26	24	21	159	
14-Aug	42	32	216	174	174	181	158	64	80	78	43	39	23	30	33	31	31	55	44	189	180	181	172	168	101	
15-Aug	170	173	202	209	214	205	208	220	359	8	44	34	14	30	48	43	35	55	66	158	179	178	180	171	133	
16-Aug	210	198	188	197	217	171	238	315	15	37	26	16	23	42	20	39	39	24	200	187	182	176	197	184	131	
17-Aug	208	199	220	208	206	217	340	353	9	16	56	54	28	43	53	34	33	57	74	73	75	94	181	194	126	
18-Aug	181	178	191	223	206	218	182	358	10	353	22	24	57	56	38	50	141	165	154	198	189	187	184	182	156	
19-Aug	184	187	213	177	205	213	220	266	279	135	142	108	212	14	126	33	134	106	94	114	193	191	193	186	164	
20-Aug	184	180	186	210	198	189	201	270	5	307	19	220	25	148	185	207	189	185	188	193	190	198	205	196	178	
21-Aug	184	185	190	200	180	191	190	208	218	214	228	232	228	215	231	226	217	212	204	199	199	191	188	188	205	
22-Aug	189	187	220	208	186	186	188	278	235	252	282	297	314	312	315	300	254	238	221	201	198	198	195	199	236	
23-Aug	217	228	215	205	210	161	209	222	65	33	2	38	20	55	74	40	15	22	74	198	195	216	187	264	132	
24-Aug	185	228	182	186	179	196	193	204	144	125	108	104	96	130	110	75	104	98	121	135	144	155	240	193	151	
25-Aug	189	179	181	188	193	187	187	319	0	161	224	223	181	187	213	190	170	173	173	170	171	179	187	189	184	
26-Aug	208	216	202	201	186	185	205	214	229	226	230	214	227	231	228	222	222	201	195	196	205	210	234	234	213	
27-Aug	240	228	211	196	185	195	191	233	256	255	265	283	250	240	256	243	257	232	209	209	205	206	228	235	229	
28-Aug	227	210	231	213	189	234	246	221	258	261	260	276	259	267	278	253	251	253	216	202	204	203	243	240	237	
29-Aug	249	250	242	243	242	197	205	263	268	314	334	306	290	285	256	233	233	239	209	203	226	217	212	222	247	
30-Aug	221	218	205	193	199	186	214	226	252	281	256	266	259	265	248	250	5	150	213	223	244	205	244	243	219	
31-Aug	237	201	212	222	226	232	232	245	251	249	247	240	249	241	226	222	222	215	205	222	207	209	201	198	225	

	Total Hours in Month	744
	Valid Hours	744
	Percent Data Captured	100.0%

Meteorological Report
The Doe Run Company
 $\Sigma\Theta$

Site Name: Rivermines

Average Interval: 01 Hour

Units: Degrees

2013	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24 Hour Avg
Day																										
1-Aug	3	2	5	0	7	2	7	20	23	27	29	29	38	45	30	37	30	22	13	2	1	2	2	3	16	
2-Aug	8	1	10	15	4	0	2	3	17	23	25	26	24	24	23	22	23	23	22	23	19	17	10	8	16	
3-Aug	0	3	0	4	2	4	5	10	23	13	25	27	25	22	28	18	19	19	13	3	2	1	2	5	11	
4-Aug	4	1	1	1	2	0	6	14	24	31	34	33	40	32	33	23	22	25	29	18	22	12	16	11	18	
5-Aug	15	16	19	11	16	11	11	19	19	16	22	23	22	23	22	24	22	26	20	21	20	21	21	12	19	
6-Aug	6	8	8	8	6	13	23	15	12	22	23	25	23	26	31	40	24	21	21	21	16	15	16	15	19	
7-Aug	14	11	24	21	22	23	30	25	22	21	29	20	23	27	26	28	15	14	8	1	3	8	6	6	18	
8-Aug	10	11	3	3	2	4	5	5	18	19	17	22	29	29	29	29	21	14	6	6	15	10	3	2	13	
9-Aug	1	4	2	4	2	3	11	16	25	24	18	7	14	24	17	20	14	15	5	1	2	1	1	0	10	
10-Aug	2	9	5	18	13	3	10	8	11	35	29	33	35	39	30	25	19	15	7	3	7	3	2	3	15	
11-Aug	3	4	2	1	2	2	8	16	24	29	39	43	40	50	28	29	22	19	22	13	9	8	3	1	17	
12-Aug	1	0	0	1	1	1	14	18	27	22	33	29	24	18	25	30	14	14	18	4	1	3	3	10	13	
13-Aug	9	8	8	5	3	5	12	10	22	24	23	24	24	22	27	23	25	19	18	9	10	7	19	16	15	
14-Aug	8	7	2	1	3	3	6	27	31	35	35	33	31	34	34	32	28	17	3	3	1	2	2	17	17	
15-Aug	3	1	5	8	5	1	4	12	10	32	50	44	28	41	29	32	26	23	10	0	1	2	1	3	15	
16-Aug	1	4	5	2	5	2	10	9	16	31	28	28	25	35	31	28	19	17	3	1	2	2	0	8	13	
17-Aug	7	3	0	3	3	6	8	16	20	26	30	40	35	43	32	31	31	31	18	20	15	17	3	3	19	
18-Aug	2	2	4	0	8	6	5	15	20	19	28	39	38	43	31	35	24	15	14	1	3	1	3	2	15	
19-Aug	5	7	7	2	0	5	8	18	20	30	45	39	39	23	41	46	32	23	10	2	2	1	2	4	17	
20-Aug	3	2	4	6	5	3	7	16	20	37	22	39	34	29	42	24	23	17	3	1	0	2	7	7	15	
21-Aug	1	2	5	10	3	8	8	10	27	26	30	40	40	30	32	28	17	10	2	1	4	0	1	1	14	
22-Aug	6	5	8	8	2	5	2	14	23	33	44	42	27	31	32	30	23	15	3	2	2	1	2	7	15	
23-Aug	8	12	9	7	7	6	11	8	23	29	26	39	36	32	12	22	21	6	2	0	1	2	1	3	14	
24-Aug	2	1	1	2	2	2	4	11	29	38	39	33	39	41	41	33	28	23	11	2	9	9	12	3	17	
25-Aug	7	1	1	6	3	7	2	11	12	26	31	28	35	35	31	27	26	19	15	16	19	19	18	17	17	
26-Aug	11	10	10	0	2	3	9	21	29	31	37	35	26	24	35	26	23	19	15	16	19	19	18	9	9	
27-Aug	2	4	11	5	3	3	2	18	37	33	39	34	34	32	28	21	27	13	3	4	7	4	5	3	15	
28-Aug	9	10	12	9	4	12	8	5	27	37	38	46	41	35	37	39	29	19	7	2	5	3	13	7	19	
29-Aug	8	10	6	11	10	5	7	23	23	34	31	40	36	39	34	27	20	17	4	3	9	6	9	9	18	
30-Aug	13	11	11	9	8	4	14	10	20	34	33	38	38	41	38	31	38	23	13	7	8	5	5	6	19	
31-Aug	5	5	8	9	8	5	9	20	32	37	35	34	45	40	33	27	24	19	15	13	3	8	1	7	18	



Total Hours in Month
Valid Hours
Percent Data Captured

744
744
100.0%

Meteorological Report
The Doe Run Company
Temperature

Site Name: Rivermines

Average Interval: 01 Hour

Units: Deg. C

Sampling Frequency: 01 Second

2013	Day	Hour																								24 Hour	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg
1-Aug	18.3	17.7	17.2	16.8	16.6	16.6	19.9	22.8	25.2	26.6	27.5	28.5	28.7	29.7	29.7	30.4	28.6	28.3	26.4	22.8	21.0	19.9	19.0	18.5	30.4	23.2	
2-Aug	18.3	17.6	17.2	17.1	16.9	17.4	18.9	21.2	24.5	27.3	28.1	28.3	28.0	27.8	26.3	26.0	26.4	25.0	24.7	24.0	23.7	23.4	22.6	22.0	28.3	23.0	
3-Aug	21.8	21.5	21.2	21.0	20.9	20.8	21.3	21.6	21.9	23.2	24.6	26.0	26.8	27.4	28.1	28.3	28.3	27.9	26.7	24.1	22.4	21.2	20.3	19.5	28.3	23.6	
4-Aug	19.1	18.8	18.4	17.6	17.4	17.3	18.3	20.9	23.1	25.2	25.7	26.1	26.7	26.8	26.5	26.0	25.4	24.6	23.8	23.2	22.5	21.6	21.1	20.2	26.8	22.3	
5-Aug	20.8	20.7	21.0	20.4	19.9	19.2	19.7	20.0	18.7	18.2	18.3	18.5	20.2	21.5	21.9	22.3	22.2	22.2	21.8	21.3	21.3	21.5	21.8	22.1	22.3	20.6	
6-Aug	21.9	21.8	21.7	21.6	21.4	21.4	21.6	21.6	22.8	24.2	24.2	25.2	26.9	28.6	29.5	29.9	29.2	28.0	26.8	25.5	24.5	23.9	23.7	23.7	29.9	24.6	
7-Aug	23.7	23.6	23.1	21.7	20.6	20.9	20.8	20.8	20.9	22.3	23.4	24.8	24.3	25.7	27.1	27.7	28.4	27.8	26.4	24.2	22.8	22.1	21.3	20.9	28.4	23.5	
8-Aug	20.6	20.6	19.9	20.0	20.2	20.0	20.7	22.1	22.4	21.9	22.2	23.7	24.5	26.6	28.0	29.2	28.7	27.1	25.9	24.7	24.5	23.8	23.1	22.6	29.2	23.5	
9-Aug	22.5	22.3	22.4	22.4	22.2	22.1	22.4	22.7	24.1	25.2	24.5	22.7	22.5	23.2	23.9	24.6	23.3	23.0	21.8	20.9	20.8	20.7	20.7	25.2	22.6	23.5	
10-Aug	20.7	20.7	20.1	19.7	19.7	20.9	21.6	22.6	24.3	25.7	26.9	27.6	28.4	28.5	28.8	27.6	26.4	25.7	23.8	23.3	21.4	20.0	19.5	28.8	23.5	23.5	
11-Aug	19.1	18.5	18.3	17.6	17.1	16.9	19.2	21.5	23.7	25.3	26.5	27.7	28.6	29.2	29.7	29.5	29.3	28.6	27.1	25.7	24.8	24.3	23.8	23.4	29.7	24.0	
12-Aug	22.0	22.0	21.3	20.9	20.4	20.4	21.9	23.6	25.5	27.1	28.1	28.9	26.9	21.4	23.4	24.7	25.3	24.7	23.2	21.8	21.1	20.6	20.6	20.4	28.9	23.2	
13-Aug	20.1	20.0	19.6	19.2	18.9	18.9	19.6	20.7	22.5	24.3	26.0	26.2	26.1	26.5	26.4	26.0	25.6	24.6	23.0	21.4	20.3	19.2	18.9	18.0	26.5	22.2	
14-Aug	16.8	15.6	13.8	12.7	11.9	11.5	14.3	17.0	19.0	20.2	21.1	21.6	21.7	22.0	22.0	22.0	21.7	21.2	19.6	16.0	14.3	13.3	12.5	12.0	22.0	17.2	
15-Aug	11.6	11.1	10.7	10.4	10.1	9.9	11.4	15.1	17.4	19.5	21.2	21.5	22.2	22.4	22.4	22.3	22.3	21.7	20.2	16.9	15.0	13.9	13.3	12.6	22.4	16.5	
16-Aug	12.2	11.6	11.5	11.0	10.8	10.8	12.9	16.4	18.8	20.5	21.1	21.4	22.0	22.8	23.1	23.3	23.2	22.4	19.8	17.1	15.8	15.0	14.4	14.2	23.3	17.2	
17-Aug	14.0	14.7	15.1	15.2	15.4	15.6	16.8	18.7	20.8	22.6	23.1	23.9	24.5	25.5	25.5	25.4	25.6	24.9	23.5	22.5	21.7	20.5	17.7	17.1	25.6	20.4	
18-Aug	16.5	16.5	16.1	15.9	16.0	15.7	16.9	19.6	22.3	22.9	24.0	25.4	26.3	26.7	26.8	26.6	26.0	24.0	23.5	22.1	20.2	19.0	18.4	17.9	26.8	21.1	
19-Aug	17.3	16.8	16.4	15.7	15.0	14.8	16.9	16.9	20.0	23.4	25.5	27.0	27.2	29.3	28.2	28.8	28.9	27.8	25.9	22.6	20.4	19.4	18.7	18.4	29.3	22.2	
20-Aug	17.9	17.4	16.8	16.7	16.2	15.8	18.2	21.8	25.0	27.4	27.9	29.3	29.3	29.7	30.3	30.8	29.5	28.2	25.8	22.8	21.6	20.7	19.8	19.3	30.8	23.3	
21-Aug	18.8	18.2	17.6	17.5	17.1	16.9	18.8	22.6	27.0	29.2	29.6	31.3	31.7	31.2	31.6	31.1	29.7	26.2	23.4	22.1	21.4	20.6	20.2	32.1	24.4		
22-Aug	19.7	19.5	19.6	19.5	19.0	18.6	20.5	24.0	28.3	30.9	31.9	32.2	32.0	32.1	32.6	32.2	30.6	27.3	25.3	24.1	23.3	22.5	22.4	32.6	25.8		
23-Aug	22.0	21.5	21.0	20.5	20.2	19.9	21.7	24.5	26.5	28.3	29.6	30.2	31.2	30.9	30.2	30.7	29.9	28.4	27.0	24.3	22.9	21.9	21.4	20.7	31.2	25.2	
24-Aug	19.7	19.1	18.5	18.0	17.6	17.4	19.3	23.3	26.3	28.5	29.8	30.6	31.0	31.4	31.7	31.4	30.9	30.2	27.7	23.9	23.1	23.4	20.3	19.3	31.7	24.7	
25-Aug	18.3	17.7	17.1	16.8	16.3	16.1	18.2	21.5	25.5	29.1	30.4	31.2	32.1	32.4	32.7	32.8	31.9	30.2	28.2	26.8	26.2	25.4	24.8	24.7	32.8	25.3	
26-Aug	24.0	22.9	22.8	21.8	20.9	21.1	23.6	26.6	28.9	30.5	31.7	32.6	33.1	34.2	34.2	33.7	32.7	30.9	29.0	27.7	26.9	25.9	24.3	34.2	32.4	27.6	
27-Aug	22.4	22.0	21.7	21.7	20.8	20.3	22.4	27.0	29.0	30.6	32.5	32.9	33.7	33.6	33.1	31.9	32.6	30.2	26.7	24.5	23.2	22.4	21.1	21.5	33.7	26.6	
28-Aug	21.2	20.7	20.4	19.9	19.4	19.4	21.5	25.2	29.0	31.2	32.7	33.4	33.9	33.9	33.5	33.8	33.3	31.5	28.0	25.0	23.3	22.8	22.7	22.1	33.9	26.6	
29-Aug	21.8	21.3	20.9	20.6	20.3	19.8	21.7	26.0	29.4	31.8	32.9	33.7	34.6	35.6	35.3	35.2	34.4	32.2	28.5	25.6	24.3	23.6	22.8	22.4	35.6	27.3	
30-Aug	21.9	21.5	21.1	20.6	20.4	20.2	22.2	26.3	30.6	33.5	34.8	35.6	36.6	36.9	37.0	37.1	34.1	32.2	30.2	28.0	27.0	26.1	25.1	24.7	37.1	28.5	
31-Aug	24.2	23.9	23.8	23.5	23.1	22.7	24.8	29.0	31.9	33.8	35.6	36.8	37.3	37.6	37.3	36.9	35.5	33.6	31.5	29.6	27.8	26.9	25.9	24.9	37.6	29.9	

BARR

Maximum Hour//Monthly Average	37.6
Total Hours In Month	744
Valid Hours	744
Percent Data Captured	100.0%

Meteorological Report
The Doe Run Company
Site Pressure

Site Name: Rivermines

Average Interval: 01 Hour

Units: mmHg

Sampling Frequency: 01 Second

2013	Hour	24 Hour																										
		Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg
1-Aug	746	746	746	746	746	746	746	747	747	747	747	747	746	746	745	745	745	745	745	745	745	745	745	745	745	747	746	
2-Aug	745	744	744	744	745	744	745	745	745	744	744	744	744	744	743	743	743	743	743	743	743	743	743	743	743	745	744	
3-Aug	743	743	743	743	743	744	744	745	746	746	746	746	746	745	745	745	745	745	745	745	745	745	745	745	745	745	745	
4-Aug	748	747	747	748	748	748	748	749	748	748	748	748	748	747	747	747	747	747	747	747	747	747	747	747	747	748	745	
5-Aug	747	746	746	746	746	746	746	746	746	745	745	745	744	744	743	743	743	743	743	743	743	743	743	743	743	749	748	
6-Aug	742	741	742	742	742	743	743	743	743	743	743	742	742	742	742	742	742	742	742	742	742	742	742	742	742	747	744	
7-Aug	742	741	741	742	742	742	743	743	744	742	741	742	742	742	742	742	742	742	742	742	742	742	742	742	742	743	742	
8-Aug	743	742	742	742	742	743	743	743	744	744	743	743	743	742	742	742	742	742	742	742	742	742	742	742	742	744	742	
9-Aug	743	744	744	744	744	744	744	744	745	745	745	745	745	745	745	745	745	745	745	745	745	745	745	745	745	744	743	
10-Aug	746	747	747	747	746	746	747	747	748	748	748	748	748	747	747	745	745	745	745	745	745	746	746	746	747	747	745	
11-Aug	748	748	748	748	748	748	748	748	748	748	748	748	748	747	747	746	746	746	746	746	747	747	748	748	748	748	747	
12-Aug	746	746	745	745	745	745	745	745	745	745	745	745	745	745	745	745	746	746	746	746	746	746	746	746	746	748	747	
13-Aug	744	744	744	744	744	744	745	745	745	746	746	746	746	746	746	745	745	745	745	745	745	743	743	743	744	744	746	
14-Aug	748	747	748	748	748	749	749	749	749	749	749	749	749	748	748	748	748	748	748	747	747	747	747	748	748	748	745	745
15-Aug	748	748	748	748	748	748	749	749	748	748	748	748	748	747	747	747	747	747	748	748	748	748	749	749	749	749	748	
16-Aug	747	747	747	747	747	748	748	748	748	748	748	748	748	747	747	747	746	746	746	746	747	747	747	747	747	749	747	
17-Aug	748	748	748	748	748	748	748	748	748	748	748	748	748	747	747	747	747	747	747	747	748	748	748	748	748	748	748	
18-Aug	748	748	747	747	747	748	748	748	748	748	748	748	748	747	747	747	747	747	747	747	747	747	747	747	748	749	748	
19-Aug	747	747	747	747	747	747	748	748	748	748	748	748	748	747	747	747	747	747	747	747	747	747	748	748	748	748	748	
20-Aug	747	746	747	747	747	747	747	747	748	748	747	747	747	747	747	746	746	746	746	745	745	746	746	747	747	748	747	
21-Aug	747	747	747	747	747	747	747	747	748	748	748	748	748	747	747	747	746	746	746	746	746	746	747	747	748	747	747	
22-Aug	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	746	746	746	746	746	746	746	747	747	748	747	747	
23-Aug	746	746	746	746	746	746	747	747	747	747	747	747	747	747	746	746	746	745	745	745	745	745	746	746	746	748	746	
24-Aug	748	748	748	748	748	749	749	749	749	748	748	748	748	747	747	747	746	746	746	746	747	747	747	747	747	746	746	
25-Aug	750	750	750	750	750	751	751	751	751	751	750	750	750	750	749	749	749	749	749	748	748	748	748	749	749	750	749	
26-Aug	750	749	749	749	750	750	750	750	750	750	750	750	750	750	750	749	749	749	749	749	749	750	750	750	750	751	750	
27-Aug	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	747	750	748	
28-Aug	745	745	745	745	745	746	746	746	746	746	746	746	746	746	745	745	745	745	745	745	745	746	746	746	746	747	746	
29-Aug	745	745	745	745	745	746	746	746	746	746	746	746	746	746	745	745	745	745	745	745	745	745	745	745	745	746	745	
30-Aug	744	744	744	744	744	744	745	745	744	744	744	744	744	743	743	742	742	741	741	741	741	741	741	741	741	744	745	
31-Aug	741	741	741	741	741	741	741	741	741	741	741	741	741	741	740	740	739	739	739	739	739	739	739	740	741	743	743	

Maximum Hour//Monthly Average		751
Total Hours In Month		744
Valid Hours//Percent Data Captured		100.0%
		744



Meteorological Report
The Doe Run Company
Precipitation

Site Name: Rivermines

2013	Hour	Average Interval: 01 Hour Sampling Frequency: 01 Second																								24 Hour	Max	Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
Day																												
1-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	
4-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.16	
5-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.73	0.19	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7-Aug	0.00	0.00	0.05	0.02	0.11	0.06	0.08	0.19	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	1.51	
8-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.15	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	
9-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.55	
10-Aug	0.00	0.06	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.06	0.29	0.14	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.62	
11-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.12	
12-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.41	
14-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31-Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

 BARR	Maximum Hour//Monthly Total 0.73 Total Hours in Month 744 Valid Hours//Percent Data Captured 744 100.0%
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